

Claims

The embodiments of the invention in which an exclusive property or privilege is claimed are defined as follows:

1. A system for elimination of twist and torsion within a vehicle chassis and leveling of said chassis, the system comprising a first two-axis tilt sensor rigidly mounted at the front of the vehicle chassis to measure chassis tilt at that location in the X axis (lateral direction) and Y axis (longitudinal direction);
a second two-axis tilt sensor rigidly mounted at the rear of the vehicle chassis to measure chassis tilt at that location in the X axis (lateral direction) and Y axis (longitudinal direction);
a host microprocessor with electrical communication to the first and second two-axis sensors to collect data to measure tilt in two axes at each of the front and rear sensor locations and;
system software to resolve the magnitude of movement, direction of movement and sequence of motions at each of the four corners of the chassis to achieve planarization of the chassis and an overall level position with respect to the earth.
2. a host microprocessor in electrical communication with lifting mechanisms to adjust the height of the vehicle chassis at each of the four corners of the chassis to include:

electrical communication to solenoid valves used to inflate and deflate pneumatic air-springs or airbags that are used as load bearing devices in pneumatic suspension systems for large vehicles;

electrical communication to hydraulic control valves used to raise and lower hydraulic jacks that are used to lift, level and support motorhomes, trailers and fifth wheel trailers;

electrical communication to electric, linear actuators used to lift, level and support motorhomes, trailers and fifth wheel trailers;

a user interface for initiation of the leveling, planarization sequence and display of vehicle movement during the leveling process.